Intercom

PRO SERIES

USER MANUAL

FOR THE

PS 4379

FOUR CHANNEL LOUDSPEAKER MASTER STATION

CONTENTS

1.0 SAFETY INSTRUCTIONS.....3
2.0 GENERAL DESCRIPTION 4
3.0 UNPACKING 4
4.0 MECHANICAL INSTALLATION.....4
5.0 MAINS POWER.....5
6.0 FRONT PANEL CONTROLS.....6-9
7.0 REAR PANEL CONTROLS.....10-11
8.0 INTERNAL CONTROLS.....12-14
9.0 MODES.....15
10.0 CABLING.....16
11.0 PARTY LINE, TECHNICAL CONCEPT.....17
12.0 WARRANTY.....17
13.0 TECHNICAL SPECIFICATIONS.....17
14.0 DESIGN CRITERIA.....18

1.0 IMPORTANT SAFETY INSTRUCTIONS !

Please always follow these instructions to help ensure against injury to yourself and damage to the system.

1) **Read** all safety and operatinginstructions before you operate the apparatus.

2) **Retain** all safety and operating instructions for future reference.

3) **Heed** all warnings on the apparatus and in the safety and operating instructions.

4) **Follow** all installation, operating and use instructions.

5) **Unplug** the apparatus from the AC power out let before cleaning. Use only a damp cloth for cleaning the exterior of the apparatus.

6) **Do not use** accessories or attachments not recommended by the manufacturer, as they may cause hazards and void the warranty.

7) **Do not operate** this apparatus in high humidity areas or expose it to water or moisture.

8) **Do not place** the apparatus on an unstable cart, stand, tripod, bracket or table. The appa ratus may fall, causing serious personal injury and damage to the apparatus.

9) **Do not block** or cover any openings in the apparatus. These are provided for ventilation and protection from overheating. Never place the apparatus near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat. Do not place the apparatus in an enclosure such as a cabinet without proper ventilation.

10) **Operate** the apparatus using only the type of power source indicated on the marking label. Unplug the apparatus' power cord by gripping the power plug, not the cord.

11) **Insert** the plug properly. Do not defeat the safety purpose of the polarized or grounding-type plug. An American polarized AC line plug has two blades with one wider than the other. This plug will fit only one way into the power outlet. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact an electrician to replace the obsolete outlet. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your out let, consult an electrician to replace the obsolete outlet.

12) **Route** power supply cords so that they are not likely to be walked on or pinched by items placed upon or against them. Pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the apparatus.

13) **Do not overload** wall outlets or extension cords, as this can result in a risk of fire or electrical shock.

14) **Unplug** this apparatus during lightning storms or when unused for long periods of time.

15) **Never insert** objects of any kind into the apparatus through openings, as the objects may touch dangerous voltage points or short out parts. This could cause fire or electrical shock.

16) **Refer all servicing** to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

2.0 GENERAL DESCRIPTION

The PS 4379 is designed to be a four channel loudspeaker master unit in an ASL Intercom system and can be used in portable as well as fixed applications.
It incorporates a power supply, auxiliary inputs, program input, headset connector, loudspeaker and a gooseneck microphone, stage announce output, IFB Mode, Paging Mode, Near Station Mode and Extended Mode (see section 9 for further explanation of each Mode) and provides full duplex communications within an ASL intercom system. The PS 4379 RM model has a small built-in electret microphone. The power supply supplies power to a max. of 40 Beltpacks or 20 Speaker Stations.

Each channel has a Volume (listen level) control, a Talk and Call button with LED indicators and a two-stage sidetone trimmer. A master volume controls the total speaker/headset volume.

The unit is equipped with a limiter for the gooseneck microphone, allowing the user to speak close into the microphone without giving rise to overload and distortion. Loudspeaker dimming is automatic when the microphone is active. Private conversation may be carried out via the headset connector with a headset or telephone handset. When a headset is connected, both gooseneck microphone and speaker are switched of automatically. The speaker can be then switch on again with the Speaker on/off button.

As an option, a XLR-6 headset connector can be fitted for binaural use of the headset. By setting internally mounted jumpers, each of the 4 channels can be assigned to either the left or the right headset can, or to both headset cans.

An electronically balanced input allows volume controlled monitoring of the audio signal. This is for local use only, it will not appear on the intercom lines.
Special attention has been paid to the intelligibility of speech. By applying low noise/high speed op-amps, a speech presence filter and a specially developed high power bridged headphone amplifier, communication is very comfortable even in environments with high background noise level. There is a separate amplifier for the loudspeaker.

The unique CALL system provides both a flashing red LED and a very distinctive and characteristic sound signal. A short push of the CALL button will make the LED flash. The Call sound signal (buzzer) will be activated when holding the button for two seconds. In case the sound signal is undesirable, all buzzers can be muted with the "All buzzers on/off" button and the volume of the buzzer can be adjusted at the front panel.

The pre-amplified microphone signal is electronically balanced available at a 3 pin male XLR. This signal can be sent to paging systems.

Fully electronic switching increases reliability and allows for :
- 'soft' microphone ON switching, latched or momentary
- remote Mic Mute facility.
- automatic speaker attenuation (adjustable), when the microphone is activated.

3.0 UNPACKING

The shipping carton contains the parts listed below:
`
* The PS 4379
* User manual
* 19" rackmount flares
* power cable
* 2 x Fuses

If any are missing, contact your dealer.

ASL has taken great care to ensure this product reaches you in flawless condition.

After unpacking the unit please inspect for any physical damage to the unit, and retain the shipping carton and relevant packing materials for use should the unit need returning.

If any damage has occured, please notify your dealer immediately so that a written claim can be initiated. Please also refer to the guarantee section of this manual.

4.0 INSTALLATION

This PS 4379 will form part of an existing or new intercom system, and connection to it is straightforward.

Adequate ventilation must be provided by allowing sufficient space around the sides and rear of the unit to ensure free circulation of air. Forced cooling is not required. The power supply is mounted on the bottom of the unit, and after a period of time it will feel hot to the touch at the bottom. This is normal, and should be no cause for alarm.
To connect the PS 4379 onto the intercom system, use professional flexible microphone cable with 2 wires and 1 shield only.

Connect the system intercom cables into the LINE connector sockets on the rear panel. Finally, when private conversation is desired, connect the headset plug into the headset connector on the front of the front panel.

The PS 4379 is fully protected against mis-wiring (reverse power) or short circuit in the interconnect cables.

A special kit is included for mounting the PS 4379 in a 19" rack, taking 2U of rack-space.

5.0 MAINS POWER

The PS 4379 may be connected to the mains power outlet to which other audio equipment is connected. The outlet should have a clean earth. Avoid using mains power outlets, which also power dimmer controlled lighting equipment.

Before connecting the unit to its AC power source, check if the mains voltage of the unit (100 V - 240 V) is in accordance with your local mains voltage.

WARNING
This appliance must be earthed

IMPORTANT
The wires in this mains lead are colour coded in accordance with the following code:

green and yellow / safety ground
blue / neutral
brown / live

As the colours of the wires in the mains lead may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

- The wire that is coloured green-and-yellow must be connected to the terminal in the plug, which is marked with the letter "E", or by the ground symbol, or is coloured green.
- The wire that is coloured blue must be connected to the terminal that is marked with the letter "N" or coloured black.
- The wire that is coloured brown must be connected to the terminal that is marked with the letter "L" or coloured red.

Those units that are supplied to the North American market will have an integral moulded 3-pin connector, which is provided to satisfy required local standards.

5.1 POWERING UP

Powering up procedure:

- Make sure that the power switch at the back of the unit is OFF.
- Connect the power cord to the rear of the station.
- Plug the other end of the power cord into a PROPERLY GROUNDED outlet.
- Turn on the power with the red button. The red overload LED will light up for about 3 seconds, then extinguishes and the green power LED will switch on, indicating the station is active.

For further installation and operation see the concerning sections.

5.2 SAFETY EARTHING

The green-and-yellow wire of the mains cord must always be connected to the electrical installation safety earth or ground. It is essential for personal safety as well as for proper operation of the PS 4379 and the other connected stations. This wire is internally connected to all exposed metal surfaces. Any rack framework into which this unit might be mounted shall be connected to the same grounding circuit.

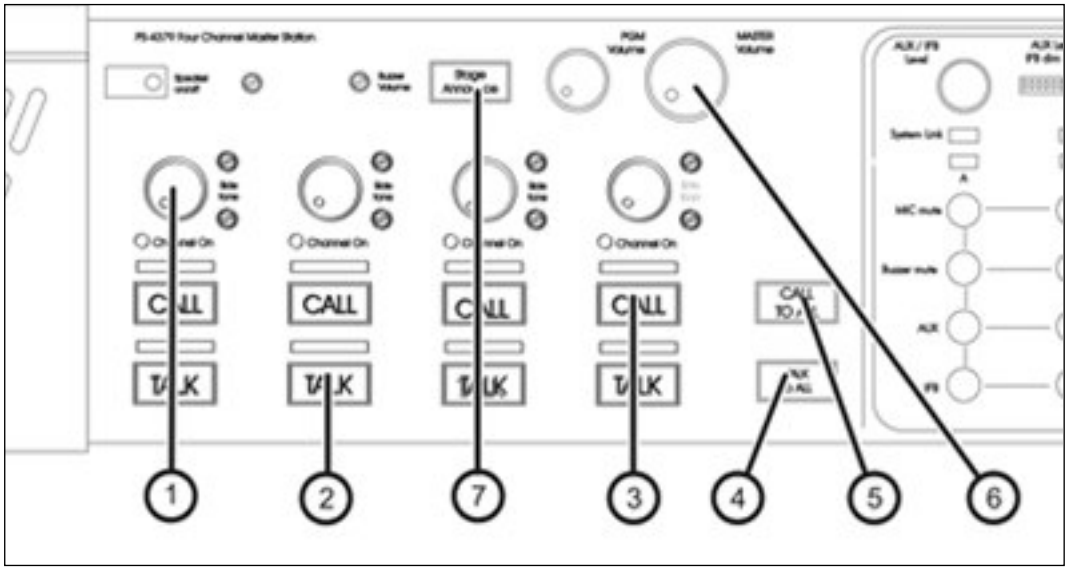
The PS 4379 employs professionally designed audio input and output circuits which do not require the disconnection of any safety earth for the avoidance of hum loops.

5.3 MAINS POWER SETTING

The unit has a switch mode power supply and accepts mains voltages from 100 - 240 VAC (50 / 60 Hz).

Mains Fuse
For all voltages : T 1250.

6.0 FRONT PANEL CONTROLS & CONNECTOR



1 LISTEN LEVEL control knobs
These knobs preset the listen level for each channel separately.

2 TALK buttons
These buttons allow you to talk to each channel separately or simultaneously.
The large green LED is lit when the talk function for that channel is activated. Should one talk to a channel which is in IFB or PAGING mode by pressing and holding that TALK button, the other lit TALK buttons will switch off for as long as the IFB / PAGING mode TALK button is pressed (for further explanation of the Modes see section 9). To talk to an IFB / PAGING channel and additionally to a intercom channel, one should also press and hold the TALK button of the intercom channel. If in IFB mode and one would like to talk to all channels of which the TALK LEDs are lit, than this can be achieved by setting the corresponding, internal dip switch "IFB and TALK" to 'on' (see 8.0 Internal controls / Dip switches).
Latched switching:
When a TALK button is pressed shortly, the microphone signal is sent to the chosen channel and the TALK button latches electronically. When pressed again, the Talk function will switch off.
`
Momentary switching:
When holding a TALK button pressed while talking, the microphone signal will be sent to the chosen channel until the button is released. Then the talk f unction will switch off automatically.

3 CALL buttons
These push buttons activate the call system, for each channel separately.
A momentary push will sent a visual CALL signal to all stations connected to the intercom channel and the call LEDS will start flashing. When holding the CALL buttons for 2 seconds the buzzer will be activated, if there is no buzzer mute on this channel. After the CALL button is released the LEDS will continue to flash for further 2 seconds.

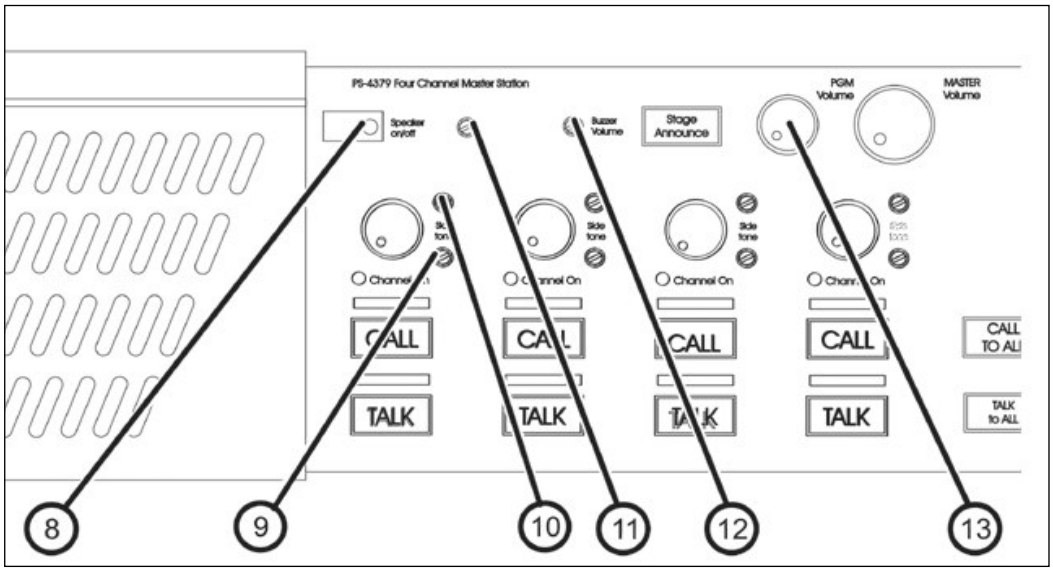
4 TALK to ALL
When the TALK to ALL button is pressed and held, one will talk to all intercom channels simultaneously and the green LEDs of all channels will light up - except for the channels which are in IFB or PAGING mode. To also include the channels which are in IFB or PAGING mode, the dip switch IFB and TALK ALL has to be switched to 'on' (see 8.0 Internal controls / Dip switches).

5 CALL ALL
When the CALL ALL button is pressed shortly a visual call signal is sent to all channels and the red LEDs will start flashing. When holding the CALL buttons for 2 seconds the buzzer will be activated, should no buzzer mute be activated for that channel. After the CALL button is released the LEDs will continue to flash for further 2 seconds. Channels which are in IFB or PAGING mode do not receive CALL signals.

6 MASTER VOLUME
This knob adjusts the volume of the speaker or headset.

7 STAGE ANNOUNCE
This push button routes the microphone signal directly to a line level output at the back of the unit. The microphone signal will not be sent to the intercom channel even if the TALK LEDs are lit. This can be changed by setting the corresponding internal dip switch (STAGE ANN. and TALK) to 'on' (see section 8.0 Internal controls / Dip switches).
The Aux signal can also be routed to the STAGE ANNOUNCE output by setting the corresponding dip switch (AUX and STAGE ANN.) to 'on' (see section 8.0). In EXTENDED Mode only the microphone signal of the Master unit will be routed to the STAGE ANNOUNCE output of the master. This can be changed by setting the corresponding dip switch (Stage announce mic. Select) to 'on'(see section 8.0) in which case each unit will use its own Stage Announce output and microphone.

6.0 FRONT PANEL CONTROLS & CONNECTOR continued



8 SPEAKER ON/OFF

With this button the speaker can be switched on or off. The LED within the button will light up if the speaker is switched on. If the speaker has been switched on when a headset was connected, the speaker will automatically switch off. By pushing the speaker on/off button, the speaker will switch back on and the audio can be heard over both the speaker and the headset. When disconnecting the headset, the last setting of the speaker will remain.

9 SIDETONE LEVEL trimmers

These trimmers (one for each channel) adjust the level of your own voice as it is heard over the speaker or headset. It prevents the speaker from feeding back into the gooseneck microphone.

Adjustment procedure for all sidetone trimmers:

- set trimmer in start position : fully clockwise.
- switch off the microphone of all connected (speaker!) stations (TALK button).
- switch on the microphone of the PS 4379.
- turn up volume.
- speak into the headset microphone.
- adjust the listen level to a minimum by turning the sidetone trimmers.

Adjusting the sidetone does not affect the level of your voice as it is heard by other stations.

10 SIDETONE HI trimmers

These trimmers (one for each channel) control the rejection in the high frequency range. It compensates the capacity of the interconnecting cables. It prevents the speaker from feeding back
into the gooseneck microphone (unit feedback). For adjustment procedure see above in point 9.

11 SPEAKER ATTENUATOR trimmer

This trimmer allows you to dim the speaker automatically, when the gooseneck microphone is switched on. It prevents:

- unit feedback if sidetone rejection is not sufficient.
- system feedback or a 'hollow' sound when the gooseneck microphones of other speaker stations on the same channel are activated simultaneously.

Adjustment procedure :

- switch off TALK buttons.
- inject an audio signal on an intercom channel.
- turn up volume.
- activate microphone and adjust the desired amount of attenuation.

The speaker attenuator has no effect when a headset is used and the speaker is switched off.

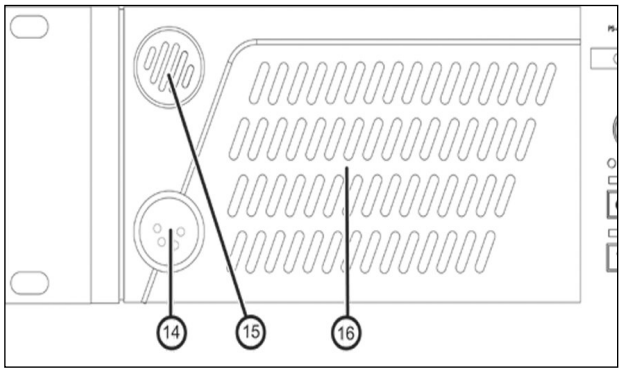
12 BUZZER VOLUME trimmer

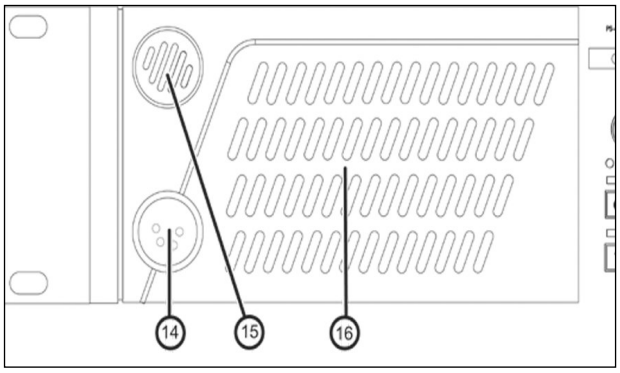
This trimmer adjusts the volume of the internal buzzer. The buzzer is activated if you press a CALL of the PS 4379 (or if a CALL button of any other station is pressed to which the PS 4379 is connected), for longer than 2 seconds, and if the buzzers on these channels are not muted.

13 PGM VOLUME

This knob adjusts the volume of the PGM input. The signal of the PGM input can only be heard on the PS 4379 and does not appear on the intercom lines.

6.0 FRONT PANEL CONTROLS & CONNECTOR continued





14 HEADSET connector

A XLR-4 type connector for the connection of a local headset when private conversation is desired.
The headset must have a can impedance of 200 ohms (or greater), or each a minimum of 400 ohm when in parallel. The headset microphone may be of the dyna mic or electret type.

Pin assignments :

1. Shield mic. (GND)
2. mic. +
3. phones +
4. phones

When connecting a headset, speaker and gooseneck microphone will be switched off automatically. The speaker can be switched on again by pushing the SPEAKER on/off button. The PS 4379 can optionally be equipped with a XLR-6 headset connector for binaural use. Jumpers on the front PCB board inside determine the destination of the listen signals on the headset.
Each listen signal of the four channels can independently be placed:

- on the left or right can.
- on both cans.

15 GOOSENECK MICROPHONE

A high quality electret noise cancelling microphone. A limiter prevents the mic pre-amp from clipping when speaking close in the microphone. The microphone is automatically disabled when a headset is used.

16 LOUDSPEAKER

A high quality loudspeaker driven by a 1.3 Watt amplifier. The speaker will switch off as soon as a headset is connected. It can be switched on again by pressing the Speaker on/off switch.

17 AUX (per channel)

By pushing the aux button of a channel, the auxiliary signal is routed to the corresponding channel. With these pushbuttons the auxiliary input can be routed to any or all channels separately. (To adjust the volume of the auxiliary, see point 17 AUX Level / IFB DIM.

18 AUX LEVEL / IFB DIM

With this knob the Volume of the AUXILIARY and the dim factor of the IFB can be set for each channel separately.

- **AUX LEVEL**
  The auxiliary can be assigned to any or all of the four intercom channels. The auxiliary volume for each channel can be adjusted separately by pushing and holding -for example- the AUX button of channel A for 2 seconds till the light starts flashing. The AUX level can now be adjusted on the AUX Level knob and is confirmed by pushing the AUX LEVEL knob. The volume setting is indicated on the LED bar (see point 18).
- **IFB DIM**
  With the IFB DIM you adjust the dim factor of the IFB auxiliary when talking over that channel. Factory setting is that the auxiliary volume will reduce by 50 %. This can be adjusted with the IFB DIM knob for each channel separately. If for example channel A has been selected to be an IFB channel the dim factor can be adjusted by pushing and holding the IFB button A for 2 seconds till the light starts flashing. The IFB dim factor can now be adjusted on the IFB DIM Level knob and confirmed by pushing the knob. The dim factor is indicated on the LED bar (see point 18).

19 AUX LEVEL / IFB DIM FACTOR LED BAR

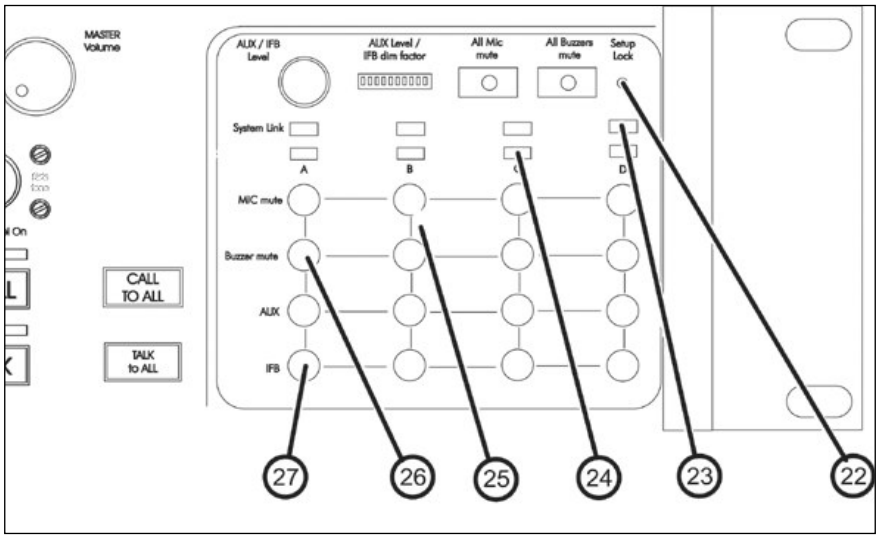
This LED Bar indicates the settings of all DIM factors and Auxiliary volumes as described in the equivalent sections.

20 ALL MIC MUTE

With this pushbutton all microphones of the connected stations and of the PS 4379 can be switched off. Each user station can activate the talk function again by pushing a TALK button.

21 ALL BUZZER MUTE

With this button all buzzers of the connected stations and of the PS 4379 can be muted.The buzzers stay muted until the ALL BUZZERMUTE button is switched off again.



22 SET UP LOCK

The setup of the AUX, IFB and Buzzer mutes can be locked by pushing a small pin into the SETUP lock. It will be unlocked by pushing it again. When pushing and holding the set up lock, the light intensity of the LEDs of the MIC MUTE-, BUZZER MUTE-, AUX- and IFB LEDs, can be increased by turning the AUX level / IFB Dim knob. In "Near Station" mode (see section 9.0 Modes) one can adjust the dim factor per channel by pushing and holding the set up lock as well as the TALK button of the required channel and turning the AUX level / IFB Dim knob. The dim factor will be shown on the Aux level/ IFB dim LED bar.

23 SYSTEM LINK LEDs (per channel)

These LEDs illuminate if another ASL Intercom System has been connected to the PS 4379 through the "System Link" connector at the corresponding channel. The Line Impedance is now provided by the other Intercom system and the internal line impedance for that channel is switched off. The Buzzer mute function on the system-linked channels can now only be controlled by the connected system, while the Buzzer Mute on the channels which are not in System link will still be controlled by the PS 4379. The Mic Mute signals given by the other Intercom system are also sent to the user stations which are connected to the PS 4379 on the channel which is in system link. If a Mic Mute is given by the PS 4379, it is only sent to its own channels and does not mute the microphones of the other Intercom System.

24 ON / OVERLOAD LEDs (per channel)

These LEDs will indicate the status of each channel. The LEDs will illuminate green if power is supplied by the internal power supply.
The LEDs will flash red, when the corresponding channel is reaching an overload. In this case the channel is still functioning but will shut off, if further units are added. If all LEDs are flashing the complete system is close to going into overload and should additional units be added, the channel will shut down. The LEDs will go constantly red, when too many units have been connected or if there is a short circuit on the corresponding channel. If all LEDs are lit red and one or more channels are switched off, a master overload occurred. In this case the channel with the lowest load will switch off. If that is not sufficient the next channel will switch off - and so on. The circuit-breaker resets automatically 3 seconds after the cause of the overload has been removed, and restores line power automatically.
The LED will also light up red for a few seconds every t time mains power is switched on.

25 MIC MUTE (per channel)

With these pushbuttons the microphones of the connected stations can be switched off for each channel separately. Each user station can activate its micro-phone again by pushing the TALK button.

26 BUZZER MUTE (per channel)

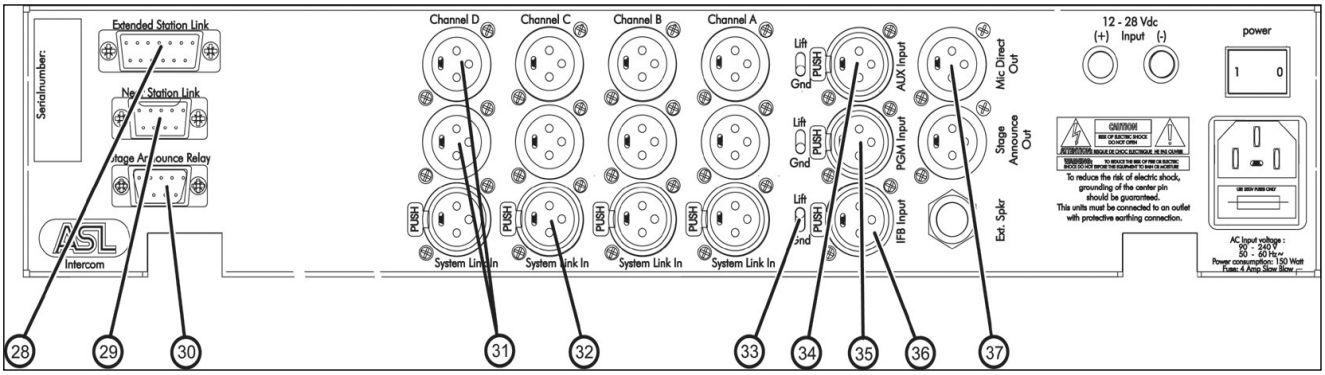
With these pushbuttons the buzzers of all stations connected to that channel can be muted, until the BUZZER MUTE button is switched off again.

27 IFB (per channel)

With these pushbuttons a channel can be put into IFB Mode. This is used for monitoring purposes and one way communication from i.e. a director or producer to a talent. If a channel is put into IFB mode, the AUX button of that channel will switch on automatically and the auxiliary signal of the IFB auxiliary input will be routed to that channel. If no IFB-Auxiliary is needed, it can be switched off by switching off the aux button of that channel. The AUX-input can also be routed to an IFB channel by switching the corresponding dip switch (IFB or AUX input for IFB) to 'on' (see section 8.0 Internal controls / Dip switches).
The TALK button of an IFB channel will be momentary and not latching and must be pressed while talking. When pressing the TALK button of an IFB channel, the aux volume will be dimmed automatically by 50 %. This dim factor can be adjusted (see point 17 AUX Level / IFB DIM).
The TALK buttons of the intercom channels will switch off for as long as the IFB TALK button is pushed. This can be changed by setting the corresponding internal dip switch (IFB and TALK) to 'on' (see section 8.0 Internal controls / Dip switches).

TO INCREASE LED LIGHT INTENSITY OF MIC MUTE, BUZZER MUTE, AUX AND IFB see point 21 'Set up lock'.

7.0 REAR PANEL CONTROLS & CONNECTOR



28 EXTENDED STATION LINK

This connector is used when 2 units (either 2 x PS 4379 or 1 x PS 4379 with PS 4379) should be linked to form a 10 or 12 channel unit. When linked, 1 station will be the master with an active speaker and goose-neck /electret microphone. The speaker and micro-phone of the other unit will be switched off. The CALL ALL and TALK ALL signals will also be sent to the channels of the extended unit.

29 NEAR STATION LINK

This connector is used to prevent system feedback when two PS 4379 / PS 4379 are used close to each other in the same room. This connection will dim the listening level should the 'near station' talk on the same channels the 'linked' station is listening to. The dim factor can be adjusted per channel by pressing and holding the 'set up lock' button and pressing and holding the TALK button of the channel. The adjust-ment is done by turning the Aux level/ IFB dim knob.

30 GPIO

This 9-pin connector is a general purpose in - out connector. The settings are as follows:

- Pin 1 = GND
- Pin 2 = GPIO output 1 (default=microphone functioning, active = high)
- Pin 3 = output 2 (default=External power supply is used, active = high)
- Pin 4 = Relay common contact
- Pin 5 GPIO input 2 (default=mic mute all button, active = low)
- Pin 6 = GPIO input 1 (default=buzzer mute all button, active = low
- Pin 7 = GPIO input 3 (default=tall all button, active = low
- Pin 8 = Relay normally open contact
- Pin 9 = Relay normally open contact

31 LINE connector (per channel)

These XLR-3 connectors are for connecting the PS 4379 to the remote stations, via standard micro-phone cable. There are two connectors for each channel.

Pin assignments:

1. 0V / ground
2. +30 V power wire
3. Audio wire

32 SYSTEM LINK connector

Input for the cable of an external party-line Intercom system which has its own power supply. If any or all of the channels are to be connected to another intercom system, then these connectors will accept the communication signals from the other system without impedance problems and without using power from the other system.

33 LIFT / GROUND switch

With these switches the pin 1 of either the AUX input, Program input or IFB input XLRs are lifted from ground when in 'Lift' position.

34 AUX INPUT connector (auxiliary)

This XLR female connector is electronically balanced and used to connect a line level signal which can be routed to any intercom channel by using the AUX buttons.

Pin assignments:

1. 0V / ground
2. Signal +
3. Signal -

35 PROGRAM INPUT connector

This XLR female connector is electronically balanced and used to connect a line level signal which will be routed to the loudspeaker of the PS 4379 only.

36 IFB INPUT connector (AUX)

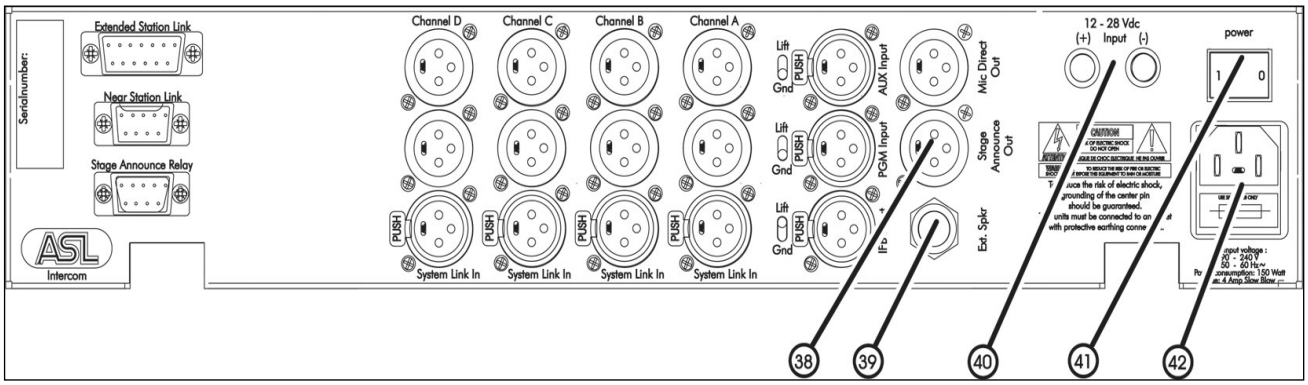
This XLR female connector is electronically balanced and used to connect a line level signal which will be routed to the channels which are in IFB mode.

Pin assignments:

1. 0V / ground
2. Signal +
3. Signal -

37 MIC DIRECT OUT

This XLR3 male connector is electronically balanced and outputs the pre-amplified microphone signal at line level.



38 STAGE ANNOUNCE OUT

This XLR 3 male connector is electronically balanced and outputs the pre-amplified microphone signal at line level when the STAGE ANNOUNCE button is used.

39 EXT. SPEAKER

An external speaker can be connected to this 6,3 mm Jack. In this case the internal speaker switches off and the audio is sent to the external speaker.

40 DC POWER INPUT

These two connectors allow an external 12-28V DC 5A, input as a back-up for the internal mains power supply, or should no 110/240 V mains supply be available.

41 POWER ON/OFF

This switch is used to switch on the internal power supply.

42 MAINS POWER CONNECTION

Mains inlet with built in fuse holder. 90 -240 V AC, 50 - 60 Hz.
Power consumption 200 Watt, Fuse: 4 Amp slow blow.

8.0 INTERNAL CONTROLS / DIP SWITCHES

Dip A					
6	5	4	3	2	1
PGM DIM	PAGING and TALK ALL	IFB and TALK ALL	IFB and TALK	PAGING AND TALK	STAGE ANN. and TALK

Dip B					
6	5	4	3	2	1
RESERVED	RESERVED	CALL Receive Channel D	CALL Receive Channel C	CALL Receive Channel B	CALL Receive Channel A

Dip C					
6	5	4	3	2	1
RESERVED	RESERVED	PAGING Channel D	PAGING Channel C	PAGING Channel B	PAGING Channel A

Dip D					
6	5	4	3	2	1
RESERVED	RESERVED	TALK Momentary Ch. D	TALK Momentary Ch. C	TALK Momentary Ch. B	TALK Momentary Ch. A

Dip E					
6	5	4	3	2	1
RESERVED	RESERVED	IFB-or AUX-input for IFB Ch. D	IFB-or AUX-input for IFB Ch. C	IFB-or AUX-input for IFB Ch. B	IFB-or AUX-input for IFB Ch. A

Dip F					
6	5	4	3	2	1
Stage announce mic. Select	Speaker dim and STAGE ANN.	AUX and STAGE ANN.	Reserved	Reserved	Mic mute block

DIP SWITCH BLOCK A

No. 6 PGM Dim (factory setting = 'off')
If this dip switch is in 'on' position the program volume will dim to zero when a TALK LED is lit.

No. 5 PAGING and TALK ALL (factory setting = 'off')
If this dip switch is in 'on' position, and the TALK ALL button is pushed and held, the microphone signal will also be routed to the channels which are in paging mode. The CALL signal will also be sent to these channels. (For PAGING functions see section 9.0 MODES).

No. 4 IFB and TALK ALL (factory setting = 'off')
If the dip switch is in 'on' position, and the TALK ALL button is pushed and held, the microphone signal will also be routed to the channels which are in IFB mode.

No. 3 IFB and TALK (factory setting = 'off')
If this dip switch is in 'on' position, and one presses and holds the TALK button of the IFB Channel, the microphone signal will also be sent to all intercom channels of which the TALK LED is lit. (For IFB functions see section 9.0 MODES)

No. 2 PAGING and TALK (factory setting = 'off')
If this dip switch is in 'on' position, and one presses and holds the TALK button of the PAGING channel, the microphone signal will also be sent to all intercom channels of which the TALK LED is lit. (For PAGING functions see section 9.0 MODES)

No. 1 STAGE ANNOUNCE and TALK (factory setting = 'off')
If this dip switch is in 'on' position, and one presses and holds the STAGE ANNOUNCE button the microphone signal will also be sent to all intercom channels of which the TALK LED is lit.

DIP SWITCH BLOCK B

No. 6 RESERVED (factory setting = 'off')
No. 5 RESERVED (factory setting = 'off')
No. 4 CALL RECEIVE Channel D (factory setting = 'off')
If this dip switch is in 'on' position, the corresponding channel will still receive a CALL signal even if the channel is switched off.
No. 3 CALL RECEIVE Channel C (factory setting = 'off') (Same as for No. 4)
No. 2 CALL RECEIVE Channel B (factory setting = 'off') (Same as for No. 4)
No. 1 CALL RECEIVE Channel A (factory setting = 'off') (Same as for No. 4)

8.0 INTERNAL CONTROLS / DIP SWITCHES

DIP SWITCH BLOCK C

No. 6 RESERVED (factory setting = 'off')
No. 5 RESERVED (factory setting = 'off')
No. 4 PAGING Channel D (factory setting = 'off')
If this dip switch is in 'on' position, the corresponding channel will be set to PAGING mode. (For PAGING functions see point 9.0 MODES)
No. 3 PAGING Channel C (factory setting = 'off')
(Same as for No. 4)
No. 2 PAGING Channel B (factory setting = 'off')
(Same as for No. 4)
No. 1 PAGING Channel A (factory setting = 'off')
(Same as for No. 4)

DIP SWITCH BLOCK D

No. 6 RESERVED (factory setting = 'off')
No. 5 RESERVED (factory setting = 'off')
No. 4 TALK MOMENTARY Channel D
(factory setting = 'off')
If this dip switch is in 'on' position, the corresponding TALK button of that channel will be set to momentary only.
No. 3 TALK MOMENTARY Channel C
(factory setting = 'off')
(Same as for No. 4)
No. 2 TALK MOMENTARY Channel B
(factory setting = 'off')
(Same as for No. 4)
No. 1 TALK MOMENTARY Channel A
(factory setting = 'off')
(Same as for No. 4)

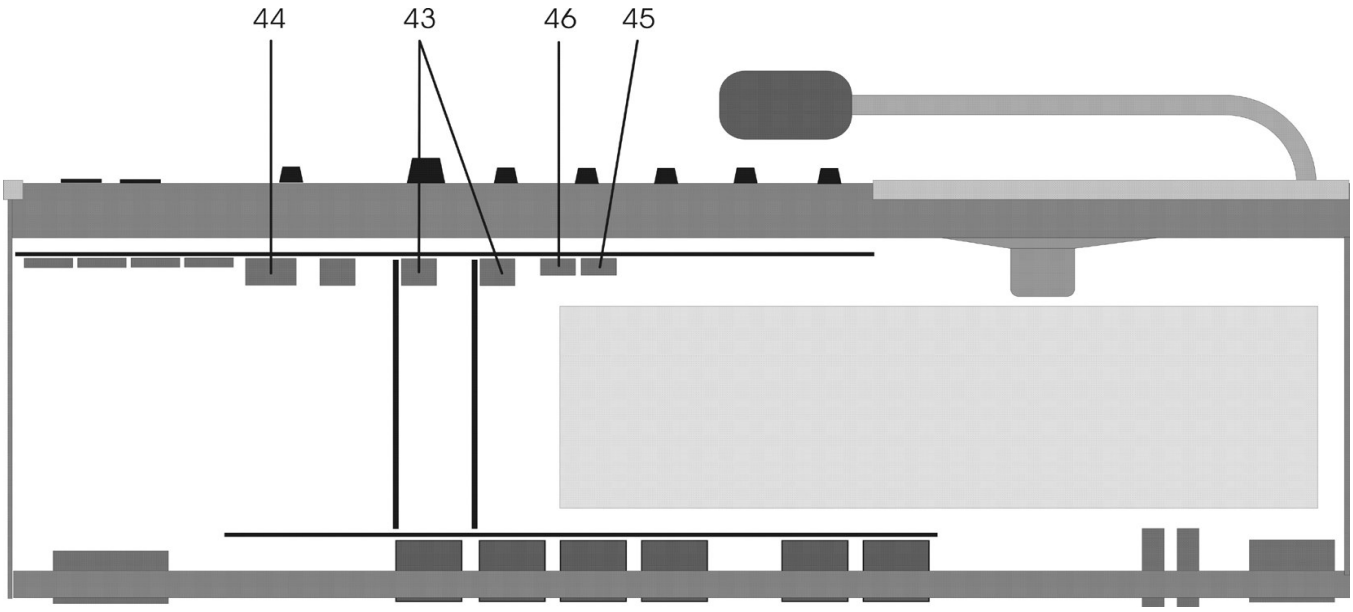
DIP SWITCH BLOCK E

No. 6 RESERVED (factory setting = 'on')
No. 5 RESERVED (factory setting = 'on')
No. 4 IFB or AUX INPUT for IFB Channel D
(factory setting = 'on')
If this dip switch is switched off, the auxiliary of the AUX input is routed to the IFB channel.
No. 3 IFB or AUX INPUT for IFB Channel C
(factory setting = 'on')
` (Same as for No. 4)
No. 2 IFB or AUX INPUT for IFB Channel B
(factory setting = 'on')
(Same as for No. 4)
No. 1 IFB or AUX INPUT for IFB Channel A
(factory setting = 'on')
(Same as for No. 4)

DIP SWITCH BLOCK F

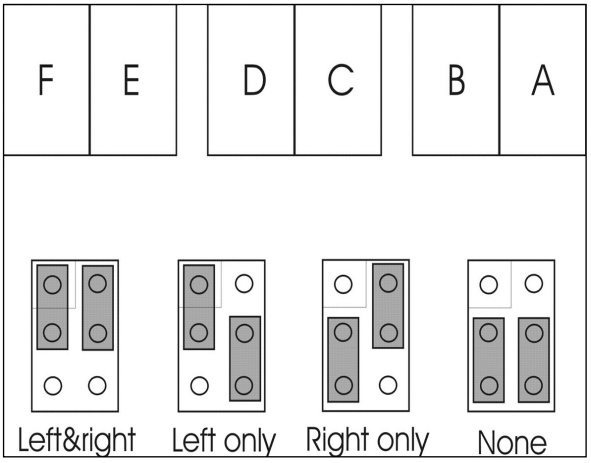
No. 6 STAGE ANNOUNCE MIC. SELECT
(factory setting = 'off')
This dip switch is only for use in EXTENDED mode (See section 9 MODES). If the dip switch is in 'off' position, the gooseneck or headset microphone and the Stage Announce output of the master unit is used. If the dip switch is in 'on' position, the micro phone and stage Announce output of the unit is used, of which the STAGE ANNOUNCE button is pressed.
No. 5 SPEAKER DIM and STAGE ANNOUNCE
(factory setting = 'off')
In 'off' position the Speaker of the PS 4379 will not reduce in volume when the STAGE ANNOUNCE button is pressed. In 'on' position, the Speaker and Program volume will be dimmed to zero as long as the STAGE ANNOUNCE button is pressed.
No. 4 STAGE ANNOUNCE and AUXILIARY
(factory setting = 'off')
In 'off ' position, no aux signal will be sent to the STAGE ANNOUNCE output. In 'on' position, the Aux signal will be sent to the STAGE ANNOUNCE output. When pressing and holding the STAGE ANNOUNCE button, the AUX volume will be dimmed to a set level. This dim factor is set by pressing and holding the STAGE ANNOUNCE button and turning the AUX level / IFB dim knob. The set level will be shown on the AUX level / IFB LED bar. The dim factor is stored by shortly pressing the AUX level / IFB knob.
By first pressing the STAGE ANNOUNCE button, releasing it and pressing and holding it again within 1 second, the AUX level LED bar will show the volume setting of the Auxiliary. This can be then adjusted by turning the AUX level / IFB Dim knob.
No. 3 RESERVED
No. 2 RESERVED
No. 1 MIC MUTE BLOCK
(factory setting = 'off')
When in SYSTEM LINK and the dip-switch is in 'off' position the mic mute signals of the connected intercom system will be routed to the outputs of the PS 4379. If the dip-switch is in 'on ' position, the Mic Mute signals of the connected intercom signals will not be detected by the PS 4379 and not routed to the outputs of the unit.

8.0 INTERNAL CONTROLS continued

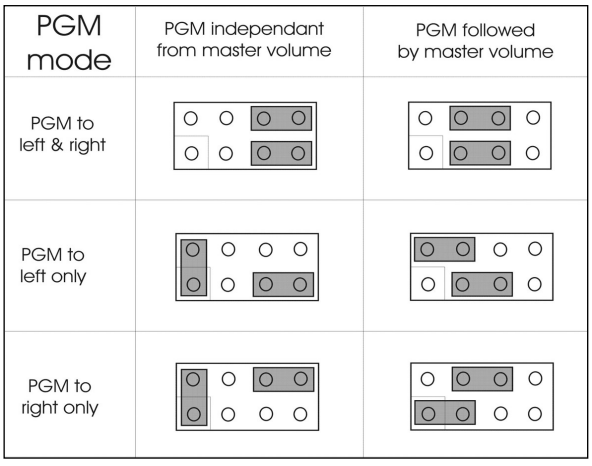


Inside the unit there are several controls that can be adjusted. These internal controls are located on the main PC board.

43 BINAURAL JUMPER SETTING
For each channel separately, these jumpers determine how the audio of that channel can be heard in case of binaural use.



44 PGM ROUTING JUMPERS
With these two jumpers you can determine, for binaural applications, how the PGM signal is controlled and where it is to be sent to.


PGM mode
PGM independant from master volume
PGM followed by master volume
PGM to left & right
PGM to left only
PGM to right only

45 HEADSET MIC GAIN
This trimmer controls the gain of the headset microphone.

46 GOOSENECK MIC GAIN
This trimmer controls the gain of the gooseneck microphone.

9.0 MODES

IFB Mode
This mode is used for one way 1 to 1 communication, e.g. director to talent. The talent will constantly listen to the IFB Aux signal or the AUX signal if the corresponding dip switch is in 'off' position (see point 8 internal controls / dip switches). The director can talk over the Aux signal by pushing and holding the IFB TALK button. The AUX volume will be dimmed to a set IFB dim factor and the microphone signal will be added to the IFB line.
To set the AUX volume see 'AUX BUTTON' (point 4.0 No. 17)To set the IFB dim factor see 'IFB Button' (point 4.0 No. 17)
In IFB mode the buzzer and mic mute buttons are disabled.

PAGING Mode
This mode is used for one way communication to dressing rooms etc. and can be 1 person to many. An AUX signal can be sent to paging receivers of which users can adjust their own listen volume. When the TALK button of the PAGING channel is pressed and held, it will override the volume setting of the receivers to a preset volume. The AUX signal will be dimmed by the preset PAGING Dim factor and the MIC signal of the PS 4379 will be added. For information on how to adjust the AUX volume, see: 'AUX Button' . The DIM factor is set by pressing and holding the TALK button and turning the AUX level / IFB dim knob. The set level will be shown on the AUX level / IFB LED bar.
In PAGING Mode the Buzzer mute on this channel is automatically activated and the buzzer mute button and mic mute are disabled. Should the channel be in both PAGING mode and System Link, the buzzer mute button will be disabled but the buzzer mute will not be activated. The PS 4379 will assume that the buzzer mute is activated by the connected intercom station.

NEAR STATION Mode
Multiple PS 4379 or PS 6379 stations in one room can be linked as 'NEAR STATIONS'. When linked, the listen levels will be dimmed if a near station is talking on the lines your own station is listening to. For example: 3 stations are mounted in a directors room and all 3 stations have the same 4 channels available. Station 1 talks to channel A and the listening volume of channel A will be dimmed by the set dim factor on station 2 + 3 to prevent system feedback. This will only be the case if the speakers are switched on. For information on how to change the NEAR STATION DIM factor, please see point 4.0 No. 20)
To connect 2 stations as "NEAR STATIONS', a Near Station 379 A link cable is needed.
To connect 3 stations you need a Near Station 379 A and a Near Station 379 B cable.

EXTENDED STATION Mode
Two stations (PS 4379 and/or PS 6379) can be linked to form one station of 8 - 12 channels. One unit will be the master unit and will have an active speaker and microphone. The speaker and gooseneck microphone of the other unit (slave) will be switched off. The head sets will continue to work on both units. Which station will be master is decided by the link cable. The link cable has a master and a slave connector and the unit connected to the master connector will be the master unit.
The TALK to ALL, CALL ALL, BUZZER MUTE ALL and MIC MUTE ALL buttons will function on both units.
The STAGE ANNOUNCE of the slave unit will be routed to the Stage Announce output of the master unit. To also use the microphone and STAGE ANNOUNCE output of the slave unit, the dip switch 'Stage Announce mic select' has to be put into 'on' position (see section 8 internal controls / Dip switches).

To connect 2 stations as "EXTENDED STATION', an Extended Station 379 A link cable is needed.
To connect 3 stations you need an Extended Station 379 A and a Extended Station 379 B cable.

10.0 CABLING

For the PRO Series Intercom system the interconnecting cables are of the shielded two-conductor microphone cable type and the intercom line connectors are of the XLR-3 type. Audio and Call signals are on XLR pin 3, DC power is on XLR pin 2. XLR pin 1 is connected to the shield of the cable which functions as the common return for audio and power.

Since the audio signal is transferred in an **unbalanced** * way, certain rules have to be obeyed when installing the cables of an intercom network. This is to avoid earth loops and to minimize power loss and the possible effect of electromagnetic fields.

These rules are:

- **Use high quality (multipair) cable.**
  For interconnecting user stations, power supplies and accessories in an ASL Intercom network, use high quality shielded two conductor (minimum 2x 0.30 mm2) microphone cable only.
  In case of a multi channel intercom network, use high quality microphone 'multipair' cable only, each pair consisting of two conductors (minimum 2x 0.15 mm2) with separate shield. Multipair cable should also have an overall shield.

- **Use flexible cables.**
  Use flexible single and multipair microphone cable instead of cable with solid cores, especially when the cable is subjected to bending during operation or installation.

- **Separate cable screen to XLR pin 1.**
  The screen of each separate microphone cable and/or the screen of each single pair in a multipair cable, should be connected to pin 1 of each XLR-3 connector. Do not connect this cable screen to the metal housing of the connector or to metal wall boxes (outlets).
  See page 10 for Earthing Concept.

- **Cable trunks, connection boxes and overall multipair cable screen to clean earth.**
  Metal cable trunks, metal connection boxes and overall multipair cable screen should be interconnected and, at one point (the 'central earthing point') in the intercom network only, be connected to a clean earth or a safety earth.
  See page 10 for Earthing Concept.

- **Keep metal connection boxes and cable trunks isolated from other metal parts.**
  Metal housings for intercom cables and connectors should be mounted in such a way that they are isolated from other metal cable and connector housings and from any other metal construction parts.

- **Keep cables parallel as much as possible.**
  When two (multi channel) units in a network are connected by more than one cable, make sure that these cables are parallel to each other over the whole distance between those units. When using multipair cable, parallelism is ensured in the best possible way.

- **Avoid closed loops.**
  Always avoid that cables are making a loop. So-called 'ring intercom' should not physically be cabled as a ring. All cable routes should have a 'star' configuration, with the central earthing point (usually close to the power supply position) as the centre of the star.

- **Keep cables away from electromagnetic sources.**
  Keep intercom cables away from high energy cables, e.g. 110/220/380V mains power or dimmer controlled feeds for spotlights.
  Intercom cables should cross energy cables at an angle of 90° only.
  Intercom cables should never be in the same trunking as energy cables.

- **Place power supply in a central position.**
  In order to avoid unacceptable power losses, place the power supply as close as possible to where most power consumption occurs or, in other words, most user stations are placed.

- **Connect ASL power supply to a 'clean' mains outlet.**
  The ASL power supply may be connected to the mains power outlet to which other audio equipment is connected. Avoid using mains outlets which also power dimmer controlled lighting systems.

In case of more complex installations, don't hesitate to contact us. Please sent us a block diagram of the planned network with a list of all user stations and their positions, and we are happy to advise you on cabling lay out.

* **See Party Line, Technical Concept**

11.0 PARTY LINE, TECHNICAL CONCEPT

ASL's PRO Series offers a complete two way ('full duplex') communications system.
Users of the system are connected via a 'party line'. Master stations (with built-in power supply), beltpacks, speaker stations and power supplies are inter-connected via standard microphone cable. One wire is used as an audio line, one as a power line and the screen of the cable functions as earth/return.

Current drive is used for signal transfer. Each station utilises a current amplifier to amplify the microphone signal and place it on the common audio line where, due to the constant line impedance (situated in the power supply between XLR pin 3 and 1), a signal voltage is developed which can be further amplified and sent to headphones or loudspeakers.

This principle has three advantages:
- the use of a single audio line allows several stations to talk and listen simultaneously.
- due to the high bridging impedance offered by each station, the number of stations 'on line' has no influence on the level of the communications signal.
- power and audio to the intercom stations use the same cable.

The Call signal is also sent as a current on the audio line. It develops a DC potential over the line impedance which will be sensed by each station and interpreted as a Call signal.

12.0 WARRANTY

This unit is warranted by ASL Intercom against defects in materials and workmanship for a period of two years from date of purchase.

Faults arising from misuse, unauthorised modifications or accidents are not covered by this warranty. If the unit is faulty it should be sent in it's original packing, to the supplier or your local ASL dealer, with shipping prepaid. A note must be included stating the faults found and a copy of the original suppliers invoice.

THIS PRODUCT WAS DESIGNED, DEVELOPED AND MANUFACTURED BY:
ASL INTERCOM BV
UTRECHT, THE NETHERLANDS.

Email: info@asl-inter.com
Website: http://www.asl-inter.com

13.0 TECHNICAL SPECIFICATIONS

POWER SUPPLY

Mains voltage	100 - 240 V AC 50/60 Hz (auto select)
DC output voltage	+30V +/- 2% DC
Max. output current	2.5A continuous / 3.5A peak
Circuit breaker delay time	0.2 sec
Automatic reset time	3.0 sec

MIC. PREAMP

gooseneck microphone type	noise cancelling electret
headset mic. impedance	200 ohms
gain	40 dB - 60 dB (adjustable internally)
presence filter	+6 dB at 5 kHz
frequency response	200 Hz 15 kHz (3 dB)
V electret mic	+9 V DC
Limiter range (gooseneck mic)	30 dB

HEADPHONES DRIVER AMP

max. load	100 ohms
max. output level	normal 17 V rms (200 ohms)
binaural	2 x 8.5V rms (400 ohms)
max. output power	normal 1 W rms (200 ohms)
binaural	2 x 0.2 W rms (400 ohms)

SPEAKER DRIVER AMP

speaker impedance	25 ohms
max. output power	2.9 W rms

PROGRAM INPUT

Input impedance	47 Kohms
Nominal input level	-12dbu to + 6 dBu
Max. input level	+ 16 dBu

AUX INPUT

Input impedance	11 Kohms
Gain	0 dB (line level)
Nominal input level	-20 dBu to + 10 dBu (line level)
Max. input level	+21 dBu (line level)

INTERCOM LINE DRIVER

max. output current	3 mA rms
output impedance	> 150 Kohms

SIDETONE

rejection	0 30dB adjustable

BUZZER

max. SPL	100 dBA

DIMENSIONS AND WEIGHT

Width / Height/ Depth	420 x 88 x 180 mm
weight	4,200 Kg

GENERAL SYSTEM SPECIFICATIONS

intercom line impedance	350 ohms (1kHz) 2.2Kohms (DC)
intercom line audio level	nom. 18 dBu max. +4 dBu
dynamic range	80 dB
call sent signal	+2.8 mA
call receive signal threshold	+2.4 V DC
supply voltage	+30 V DC (12 V to 32 V)
mic mute power interrupt time	0.1 sec

Note: 0 dBu = 775 mV into open circuit

ASL reserve the right to alter specifications without further notice.

14.0 DESIGN CRITERIA

Applications / Environment of use
ASL Pro Series equipment is designed for use as a wired communications system in theatres, in Radio/TV production facilities, in factories, and in utilities com plexes such as airports, railway stations and coach terminals.

ASL equipment can be used outdoors in normal weather conditions. In conditions with excessive cold (<-10° C), heat (>50° C) or humidity (>85%), ASL equipment might not perform properly.

ASL equipment is not designed to be used under water, or in situations where explosion safe equipment is specified by authorities.

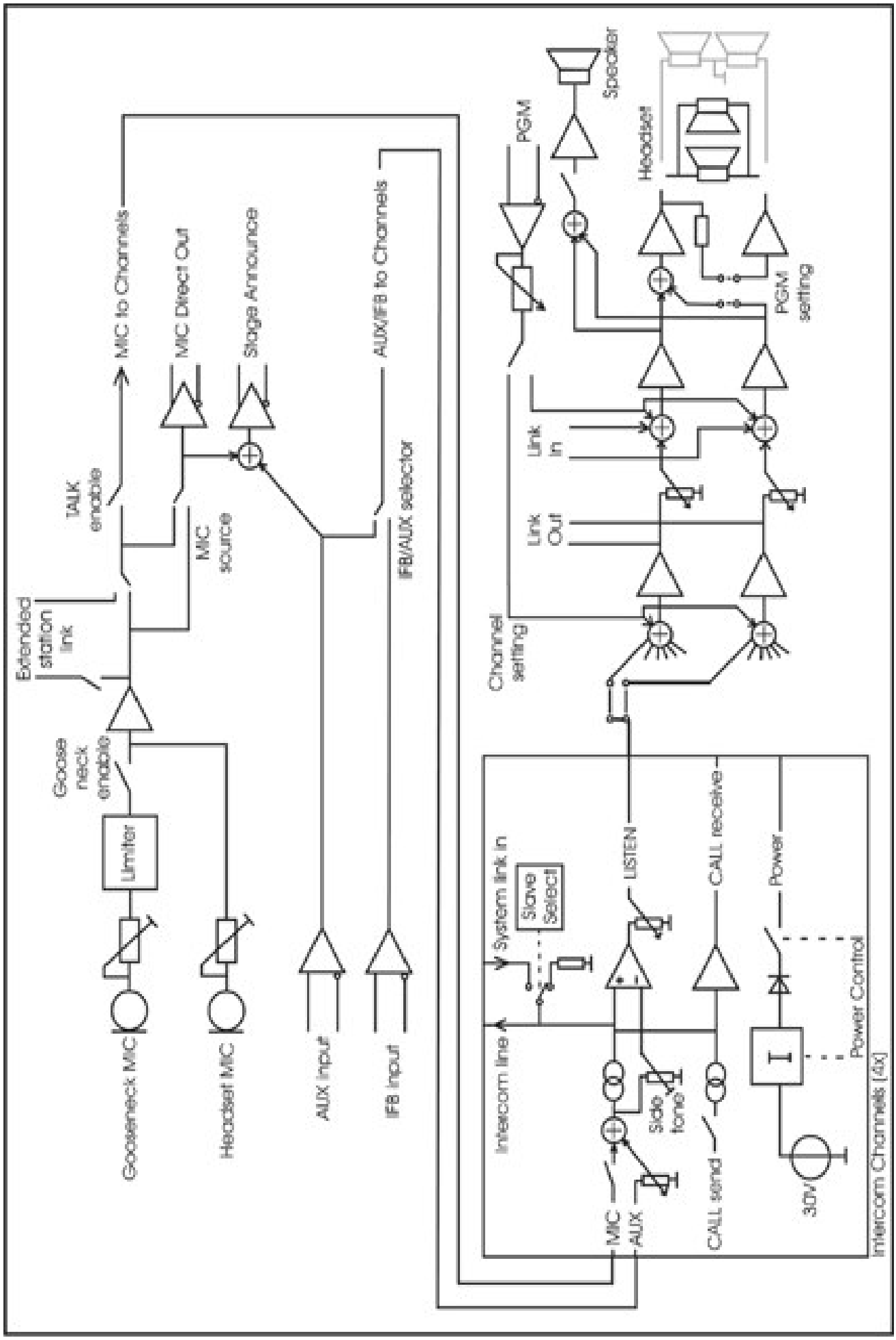
Emission
ASL Pro Series equipment does not generate high fre quency (HF) signals. An ASL power supply can generate a weak magnetic field caused by the power transformer. To avoid possible negative affects, keep ASL power supplies at a safe distance from equipment which is very sensitive to magnetic fields.

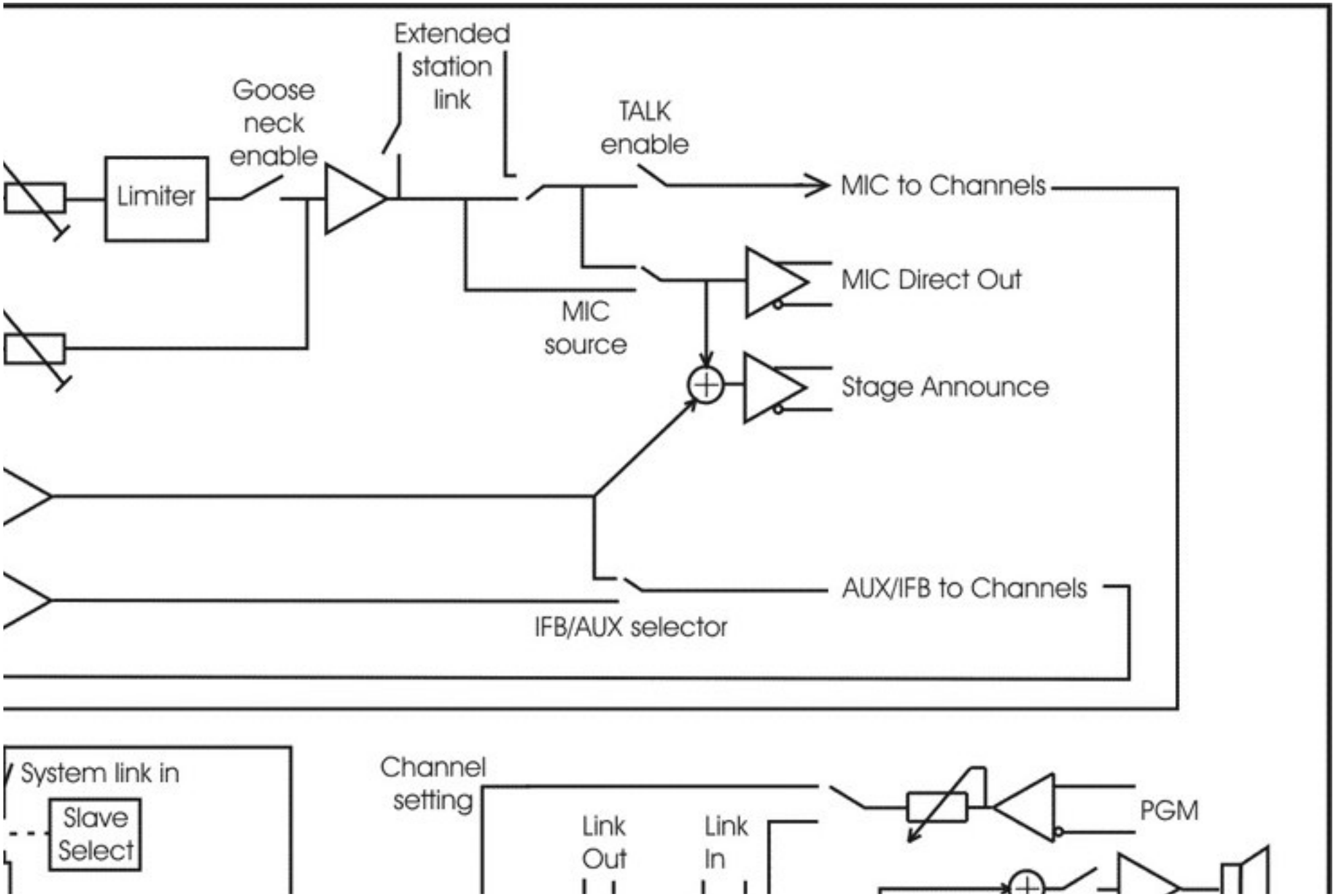
Immunity
ASL Pro Series is designed on the base of low impedance signal transport. User stations and power supplies are to be connected via low capacity cabling with an overall screen (also see Cabling section). Therefore, HF signals are adequately rejected to maintain an intelligible communication, unless strong electro-magnetic fields (exceeding 3 V/m) are in the direct vicinity of the interconnecting cables.

ASL 19" rack mount units are housed in a 1 mm steel enclosure (closed construction), which offers, by nature, the highest possible rejection of electro-magnetic fields

ASL speaker stations (PS 130/230/430) are housed in an enclosure made of 1 mm steel with ABS side panels, which offers adequate rejection of electro-magnetic fields.

ASL beltpacks are housed in an ABS enclosure and are slightly more sensitive to electro-magnetic fields. Negative effects in the performance of beltpacks can be avoided when keeping them at a safe distance from equipment which might radiate strong electro-magnetic fields, such as transmitters antennas and dimmers.


Speaker
PGM
Headset
PGM setting
Link In
Link Out
Channel setting
MIC to Channels
MIC Direct Out
Stage Announce
AUX/IFB to Channels
TALK enable
MIC source
IFB/AUX selector
Extended station link
Goose neck enable
Limiter
Gooseneck MIC
Headset MIC
AUX input
IFB input
System link in
Slave Select
Intercom line
LISTEN
CALL receive
Power
Side tone
CALL send
MIC
AUX
30V
Power Control
Intercom Channels [4x]



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